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ANNUAL REPORT 2004-2005 RAPPORT ANNUEL

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CA20N
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The Centennial Centre of Science and Technology

Financial Statements

For the Year Ended March 31, 2005



ONTARIO
SCIENCE
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Auditor's Report

To the Board of Trustees of the Centennial Centre of Science and Technology and to the Minister of Culture

I have audited the balance sheet of The Centennial Centre of Science and Technology as at March 31, 2005 and the statements of operations, changes in equity, and cash flows for the year then ended. These financial statements are the responsibility of the Centre's management. My responsibility is to express an opinion on these financial statements based on my audit.

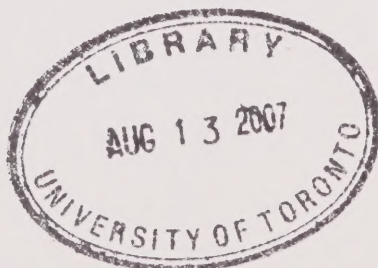
I conducted my audit in accordance with Canadian generally accepted auditing standards. Those standards require that I plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In my opinion, these financial statements present fairly, in all material respects, the financial position of the Centre as at March 31, 2005 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.



Gary R. Peall, CA
Deputy Auditor General

Toronto, Ontario
June 28, 2005



Management's Responsibility For Financial Information

Management and the Board of Trustees of the Ontario Science Centre are responsible for the financial statements and all other information presented in the Annual Report. The financial statements have been prepared by Management in accordance with the Canadian generally accepted accounting principles, and, where appropriate, include amounts based on Management's best estimates and judgments.

The Ontario Science Centre is dedicated to the highest standards of integrity in its business. To safeguard assets, the Centre has a sound set of internal financial controls and procedures that balance benefits and costs. Management has developed and maintains financial and management controls, information systems and management practices to provide reasonable assurance of the reliability of financial information.

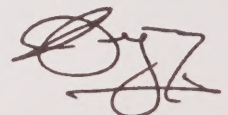
The Board of Trustees meets quarterly to oversee the financial activities of the Centre, including an annual review of the financial statements and the Auditor General's report.

The financial statements have been examined by the Auditor General. The Auditor General's responsibility is to express an opinion on whether the financial statements are fairly presented in accordance with Canadian generally accepted accounting principles. The Auditor's Report outlines the scope of the Auditor's examination and opinion.



Lesley Lewis
Director General

June 28, 2005



Grant Troop
Director
Business Planning
and Operations

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

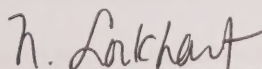
Balance Sheet

As at March 31, 2005

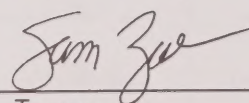
	2005 (\$ 000)	2004 (\$ 000) (Restated Note 3)
ASSETS		
Current		
Cash and short-term investments	12,091	13,277
Accounts receivable	720	680
Prepaid expenses	263	193
Inventory of general stores and small tools	119	108
	<u>13,193</u>	<u>14,258</u>
Capital Assets (Note 4)	<u>31,307</u>	<u>15,778</u>
	<u>44,500</u>	<u>30,036</u>
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable and accrued liabilities	4,596	2,413
Deferred revenue	2,238	1,498
Due to the Province of Ontario	6,292	2,188
Loans Payable [Note 10(b) and (c)]	414	417
	<u>13,540</u>	<u>6,516</u>
Long-Term Liabilities		
Obligation for Employee Future Benefits	3,153	2,903
Loan Payable to Province of Ontario [Note 10(a)]	5,300	5,300
Loan Payable to Ontario Financing [Note 10(b)]	—	250
Loan Payable [Note 10 (c)]	—	164
	<u>8,453</u>	<u>8,617</u>
Deferred Capital Contributions (Note 5)	23,792	10,031
Unspent Deferred Capital Contributions	<u>—</u>	<u>5,015</u>
	<u>23,792</u>	<u>15,046</u>
Equity		
Invested in Capital Assets (Note 6)	7,515	5,747
Deficit	(8,800)	(5,890)
	<u>(1,285)</u>	<u>(143)</u>
	<u>44,500</u>	<u>30,036</u>

Commitments and Contingency (Note 12)
See accompanying notes to financial statements.

Approved on behalf of the Centre:



Trustee



Trustee

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Statement of Operations

For the Year Ended March 31, 2005

	2005 (\$ 000)	2004 (\$ 000) (Restated Note 3)
Revenue		
Province of Ontario		
Operating grant	13,325	12,621
Occupancy grant [Note 12(b)]	3,967	3,968
Other grants	525	288
General Admission and Parking Fees	4,050	3,471
Revenue from Ancillary Operations (Schedule 1)	8,379	9,596
Corporate Donations – Agents of Change Project (Note 13)	798	763
	<u>31,044</u>	<u>30,707</u>
Expenses		
General Operations		
Exhibits and Programs	1,298	1,165
Marketing and Advertising	2,199	1,884
Visitor Services	2,957	2,754
Facility Operations	4,428	4,277
Program Management	4,167	4,429
Administration	2,494	2,226
Occupancy Costs [Note 12(b)]	5,400	4,127
Expenses from Ancillary Operations (Schedule 1)	7,139	8,040
Agents of Change project (Note 13)	798	763
	<u>30,880</u>	<u>29,665</u>
Net income before amortization	<u>164</u>	<u>1,042</u>
Amortization of Deferred Capital Contribution (Note 5)	1,320	1,019
Amortization Expense	(2,626)	(2,659)
	<u>(1,306)</u>	<u>(1,640)</u>
Net (loss)/income for the year	<u>(1,142)</u>	<u>(598)</u>

See accompanying notes to financial statements.

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Statement of Changes in Equity

For the Year Ended March 31, 2005

	2005 (\$ 000)			2004 (\$ 000)
	Equity Invested in Capital Assets	Deficit from Operations	Total	(Restated Note 3) Total
Balance, beginning of year	5,747	(5,890)	(143)	50
Transfer from Special Purpose Fund	—	—	—	405
Investment in capital assets	3,074	(3,074)	—	—
Net (loss)/income for the year	(1,306)	164	(1,142)	(598)
Balance, end of year	7,515	(8,800)	(1,285)	(143)

See accompanying notes to financial statements.

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Statement of Cash Flows

For the Year Ended March 31, 2005

	2005 (\$ 000)	2004 (\$ 000) (Restated Note 3)
Cash and short-term investments, beginning of year	13,277	8,836
Cash Flows from Operating Activities		
Net (loss)/income for the year	(1,142)	(598)
Adjustments for items not requiring an outlay of cash		
• Amortization of capital assets	2,626	2,659
• Amortization of deferred capital contribution	(1,320)	(1,019)
	164	1,042
Net change in non-cash working capital	6,903	(1,004)
Net cash generated through operating activities	7,067	38
Cash Flow from Investing Activities		
Capital Assets acquisitions	(18,155)	(3,236)
Net cash used in investing activities	(18,155)	(3,236)
Cash Flows from Operating Activities		
Net (decrease)/increase in long-term liabilities	(164)	(167)
Deferred contributions – agents of change	9,066	5,460
Deferred contributions – other capital projects	1,000	2,346
Net cash generated from financing activities	9,902	7,639
Cash and short-term investments, end of year	12,091	13,277

See accompanying notes to financial statements.

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Schedule of Revenue and Expenses from Ancillary Operations

For the Year Ended March 31, 2005

SCHEDULE I

	2005 (\$ 000)			2004 (\$ 000)		
	Revenue	Expenses	Net	Revenue	Expenses	Net
Omnimax	2,057	1,897	160	1,606	1,792	(186)
International Sales and Rentals	1,923	1,610	313	3,177	2,789	388
School Admissions/Programs	1,475	1,663	(188)	1,343	1,600	(257)
Camps	679	712	(33)	678	604	74
Memberships	571	512	59	1,025	468	557
Concessions	547	—	547	367	17	350
Interest	468	16	452	481	26	455
Facility Rentals	330	222	108	262	251	11
Sponsorship/Donations	231	427	(196)	584	426	158
Other	98	80	18	73	67	6
Totals	8,379	7,139	1,240	9,596	8,040	1,556

See accompanying notes to financial statements.

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Notes to Financial Statements

March 31, 2005

1. Nature Of The Business

The Centennial Centre of Science and Technology, commonly known as the Ontario Science Centre, a government enterprise of the Province of Ontario, was incorporated without share capital pursuant to the Centennial Centre of Science and Technology Act. The objectives of the Centre are to:

- maintain and operate a science centre and related facilities that will stimulate the interest of the public;
- conduct a program of education in the origins, development and progress of science and technology, and their relationship to society;
- depict the role of Ontario in the furtherance of science and technology; and
- collect, manufacture, market, exhibit and sell objects and displays.

As an Ontario Crown agency, the Centre is exempted from federal and provincial income taxes.

2. Significant Accounting Policies

The financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles. The significant accounting policies used to prepare these financial statements are summarized below:

(A) REVENUE RECOGNITION

Revenue on exhibits manufactured for sale is recognized on a percentage of completion basis.

Revenue from facility rental, food and beverage sales is recognized when services are provided.

(B) EXPENSE RECOGNITION

Expenses are recognized on an accrual basis as incurred, in the period to which they relate.

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Notes to Financial Statements

March 31, 2005

2. Significant Accounting Policies (Continued)

(C) DEFERRED CAPITAL CONTRIBUTIONS

Deferred capital contributions represent the amount of donations and government grants received and used to acquire capital assets but not yet recognized as revenue. Revenue will be recognized over the same period as the expected life of the capital assets to which they relate, in order to properly match revenues with costs.

(D) CASH AND SHORT-TERM INVESTMENTS

Cash and short-term investments include cash on hand, balances with banks, and highly liquid investments with maturities of three months or less.

(E) DEFERRED REVENUE

Deferred revenue is comprised mainly of deposits for membership passes and future exhibit rentals.

(F) CAPITAL ASSETS

Capital assets are recorded at cost less accumulated amortization. Amortization begins when capital assets are ready for use. Amortization is calculated using the straight-line method over the estimated useful lives of the assets as indicated below:

Omnimax Theatre Leasehold Improvements	20 years
Leasehold Improvements	10 years
Exhibits	10 years
Exhibits – Rentals	4 or 5 years
Furniture, Fixtures and Equipment	5 years

The land on which the Centre is located is leased from the City of Toronto for \$1 per annum on a 99-year lease, which commenced July 1, 1965. The Management Board Secretariat owns the buildings, which house the Centre. For details of occupancy costs see note 11(b).

(G) INVENTORY

Inventory is valued at the lower of cost or replacement cost.

(H) USE OF ESTIMATES

The preparation of financial statements in accordance with Canadian generally accepted accounting principles requires that management make estimates and assumptions that affect the reported amount of assets and liabilities as at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual amounts could differ from these estimates.

3. Change In Accounting Policy

In prior years, the Centre did not record the liabilities pertaining to the legislative severance and compensated absences components of its employee future benefit costs because these liabilities had been determined and recognized by the Province in its financial statements. While the Province continues to accrue for these costs each year, management has decided that it is appropriate to recognize the liability for these costs in these financial statements. This change in accounting policy was implemented in the current year and has been applied retroactively. The effect of this change is as follows:

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Notes to Financial Statements

March 31, 2005

3. Change In Accounting Policy (Continued)

	2004 Previously Stated (\$ 000)	Increase (Decrease)	2004 Restated (\$ 000)
Program Management	4,179	250	4,429
Net income (loss)	(348)	(250)	(598)
Accounts payable and accrued liabilities	1,806	607	2,413
Obligation for employee future benefits	—	2,903	2,903
Equity	3,367	(3,510)	(143)

4. Capital Assets

Capital assets consists of the following:

	2005 (\$ 000)		2004 (\$ 000)
	Cost	Accumulated Amortization	Net Book Value
Leasehold Improvements	18,210	3,184	15,026
Omnimax Theatre Leasehold Improvements	14,432	6,532	7,900
Exhibits	8,970	1,841	7,129
Exhibits – Rentals	2,391	1,187	1,204
Furniture, Fixtures and Equipment	81	33	48
	44,084	12,777	31,307
			15,778

Net carrying amounts of Capital Assets (Work-in-Progress) not being amortized at the end of March 31, 2005:

	2005 (\$ 000)
Leasehold improvements	12,227
Exhibits	3,764
Exhibits – Rentals	41
	16,032

5. Deferred Capital Contributions

The changes in the deferred capital contributions balance are as follows:

	2005 (\$ 000)	2004 (\$ 000)
Balance, beginning of year	15,046	8,259
Net additions/transfers during year	10,066	7,806
Amortization of deferred capital contributions	(1,320)	(1,019)
	23,792	15,046

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Notes to Financial Statements

March 31, 2005

5. Deferred Capital Contributions (Continued)

The ending balance of deferred capital contributions consists of the following:

	2005 (\$ 000)	2004 (\$ 000)
Agents of Change Project	15,650	6,957
Omnimax	4,990	5,444
Health and Safety Initiatives	2,980	2,252
Leasehold Improvements	172	393
	<u>23,792</u>	<u>15,046</u>

6. Equity Invested In Capital Assets

Equity invested in capital assets represents the following:

	2005 (\$ 000)	2004 (\$ 000)
Capital assets, net	31,307	15,778
Less amount financed by deferred capital contributions	(23,792)	(10,031)
	<u>7,515</u>	<u>5,747</u>

7. Property Maintenance And Repairs

Certain maintenance and repair expenses of the Centre are absorbed by the Province of Ontario, through Ontario Realty Corporation, and are not included in the Statement of Operations.

8. Economic Dependence

The Centre is dependent on the Province of Ontario for financial assistance to cover some of the cost of operations.

9. Employee Benefits**(A) PENSION BENEFITS**

The Centre provides pension benefits for substantially all its permanent employees through participation in the Public Service Pension Fund (PSPF) and the Ontario Public Service Employees' Union Pension Fund (OPSEU) Pension Fund which are multi-employer plans established by the Province of Ontario. These plans are accounted for as defined contribution pension plans as the Centre has insufficient information to apply defined benefit plan accounting.

The Centre's contributions related to the pension plans for the year were \$955,947 (2004 – \$934,389). These contributions have been included in salaries and employee benefits in the Statement of Operations.

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Notes to Financial Statements

March 31, 2005

9. Employee Benefits (Continued)

(B) NON-PENSION BENEFITS

The costs of legislated severance and unused vacation entitlements earned by employees during the year are now accrued for in the financial statements as disclosed in Note 3. The cost of post-retirement non-pension benefits were paid by the Ministry of Government Services and are not included in the Statement of Operations.

10. Loans Payable

(A) LOAN FROM PROVINCE OF ONTARIO

The Province made an interest-free repayable loan of \$5.3 million to the Centre to construct the Omnimax Theatre. The Centre shall repay this loan by annual payments commencing in 1999/2000 in amounts equal to 50% of the average annual profits received by the Centre from the Omnimax Theatre during the previous two fiscal years, if any. Such annual payments shall continue until the principal of the loan is repaid.

(B) LOAN FROM THE ONTARIO FINANCING AUTHORITY

In 2002/03, the Ontario Financing Authority (OFA) lent the Centre \$1,000,000, at short-term interest rates calculated by the OFA and payable monthly. The Centre had repaid \$750,000 of the loan balance by March 31, 2005. The remaining balance is to be repaid on March 31, 2006.

In 2004/05, the Centre signed a new loan agreement with the Ontario Financing Authority (OFA) for \$10,000,000, with short term interest rates calculated by the OFA and payable monthly. The Centre will receive the loan in the coming fiscal year in three installments.

(C) FOOD SERVICE AGREEMENT

The Centre entered into a 10-year agreement with a food services company to provide food services until May 31, 2006. The company contributed approximately \$1.5 million to the Centre for the construction of new restaurants and other food service related facilities, as stipulated under the terms of the agreement.

The annual net profit from the food and beverage operations managed by the company are to be shared between the company and the Centre in accordance with a formula in the agreement. The agreement specifies certain fixed payments to the company as follows: (1) an annual management fee, starting at \$130,000 in 1996/97, reduced by \$10,000 for each of the following nine years; and (2) a refund of the \$1.5 million contribution without interest in nine equal installments, which started in 1997/98.

11. Breakdown Of Expenses

Expenses are reported in the Statement of Operations on a functional basis.

Total expenses by type are as follows:

	2005 (\$ 000)	2004 (\$ 000)
Salaries and Benefits	16,366	17,308
Other Direct Operating Expenses	14,514	12,357
	<u>30,880</u>	<u>29,665</u>

THE CENTENNIAL CENTRE OF SCIENCE AND TECHNOLOGY

Notes to Financial Statements

March 31, 2005

12. Commitments And Contingency

(A) IMAX DOME PROJECTION SYSTEM MAINTENANCE AGREEMENT

The Centre has a ten-year agreement expiring in December 2006, with an automatic renewal for one further ten-year term, for leasing and servicing of an Imax Dome Projection System. The agreement commits the Centre to: (1) monthly rental payments to be calculated in accordance with a formula based on admission revenue; and (2) an annual maintenance fee of \$66,000 (adjusted to reflect changes in the Consumer Price Index for Toronto).

(B) OCCUPANCY COST

Effective April 1, 1998, the Province began charging the Centre an accommodation fee for occupying its facilities. The fee covers rent, taxes, maintenance and certain operating costs. The lease expired on March 31, 2003 and it is being renewed on a year-to-year basis until a new agreement is reached between the Centre and the Province. The minimum lease payment for the coming year is \$3,964,536. The Centre receives a Ministry grant each year to fund a majority of this expenditure.

The Centre is also negotiating a new lease agreement with the City of Toronto for the Centre's parking lot.

(C) EQUIPMENT LEASES

The Centre leases some of its equipment on an operating lease basis. Total lease commitments for the next three years are as follows:

	(\$ 000)
2005/06	207
2006/07	125
2007/08	32
	<u>364</u>

13. Pledges For Agents Of Change Project

The Centre has embarked on a \$45 million capital project called Agents of Change. The project will focus on innovation and will renew about one quarter of the Centre's public space, including the creation of seven new Experience Areas. As at March 31, 2005, the Centre has received or recorded as receivables approximately \$18 million of contributions. Amounts pledged but not yet received are as follows:

	(\$ 000)
2005/06	11,138
2006/07	7,565
2007/08	1,429
Up to 2017/18	7,453
	<u>27,585</u>

14. Comparative Figures

The March 31, 2004 comparative figures have been reclassified where necessary to conform to the current year's presentation.

PUBLIC SECTOR DISCLOSURE ACT

This statement is provided under the Public Sector Salary Disclosure Act.

The following employees of the Ontario Science Centre were paid a salary of \$100,000 or more in 2004.

EMPLOYEE	POSITION	SALARY	TAXABLE BENEFITS
Joann Bennett	Director, Business Development	\$113,904.04	\$185.07
Bernard Gorecki	Director, Marketing & Visitor Services	\$113,904.04	\$185.07
Lesley Lewis	Director General and CEO	\$142,012.26	\$249.36
Jennifer Martin	Director, Visitor Experience	\$113,904.04	\$185.07
Hooley McLaughlin	Deputy Director, Visitor Experience	\$103,079.00	\$167.28
Grant Troop	Director, Business Planning & Operations	\$113,904.04	\$185.07

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THE YEAR

HOTSPOT **FOR CURRENT SCIENCE:**

Phase 1 of the amazing new
Weston Family Innovation Centre

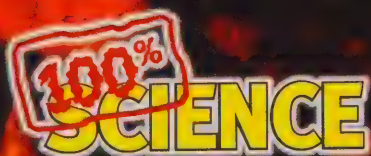
PLUS!

INVESTING IN INNOVATION:

Growing partnerships expand Agents of Change

REBRANDING THE SCIENCE CENTRE:

Bruce Mau on evolving an icon



robot doctors, bone-eating zombie worms,
self-cleaning feet *and more...*



Change your mind.

Weston Family Innovation
Centre Phase 1
Launched March 10, 2005

Cover Image:
Close-up of bread mould



ONTARIO
SCIENCE
CENTRE

2004-2005
Government
Publications

THE YEAR

SCIENCE HOTSPOT:

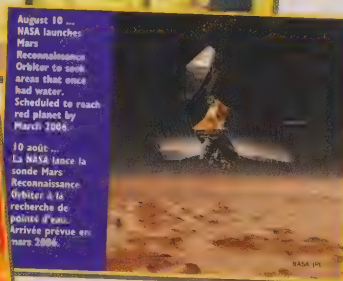
The new Weston Family Innovation Centre Phase 1 serves up current science that's hot, controversial and sometimes even contagious. Plus: Building more Agents of Change for the same change, and challenging students to put their innovative ideas into practice. **4-5**

INVESTING IN INNOVATION:

Science Centre plans expand as a new lead partner lineup boosts the Agents of Change campaign beyond its \$40-million goal. **6**

STILL CHANGING MINDS:

During its 35th anniversary year, the Science Centre is still changing, growing a fresh yet familiar trillium logo with Bruce Mau Design. **7**



THE YEAR IN REVIEW:

Innovation: Pilot testing new ways of bringing science to the people.

Current science: Public forums address controversial current science and cutting-edge technology, while exhibitions and an IMAX® Dome film at the Shoppers Drug Mart® OMNIMAX® Theatre explore origins of life.

Cosmos: A travelling exhibition, night sky celebrations and space missions bring the stars a little closer.

Technology: Robotic and digital cultures merge in festivals and workshops.

Real world: Students battle biotech, visitors take on real-life problems in the Challenge Zone.

Environment: A month of activities and an IMAX Dome film bring the outdoors inside.

Learning: Reaching high-school and university students through partnerships, curriculum and OSClub.

International: Successful Science Centre exhibitions roam cities from North America to South Africa. **8-13**

COUNTING CHANGE:

How is the Science Centre transforming itself and the visitor experience? Let us count the ways. **14**

SPECIAL SECTION:

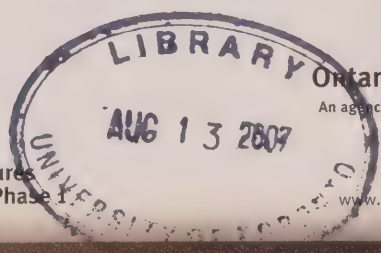
- Letter from the CEO and Board Chair
- Sponsors, Donors and Partners
- Board of Trustees

IN OUR NEXT ISSUE:

A special preview of the 2006 opening of the Weston Family Innovation Centre Phase 2, Grand Central and an exploration plaza sponsored by TELUS. Plus, anatomy of an exhibition: BODY WORLDS 2, and more. **15**

100%
SCIENCE

Fascinating current science stories, facts and figures
fresh from the Weston Family Innovation Centre Phase 1



Ontario Science Centre
An agency of the Government of Ontario
770 Don Mills Road
Toronto, Ontario
M3C 1T3
www.OntarioScienceCentre.ca

Curtain rises on the **NEW** Weston Family Innovation Centre

Massive, rear-lit glass portals framed a soaring space humming with "newsroom" activity. Science headlines of the day scrolled overhead. Large plasma screens encapsulated current science stories. Digital field diaries delivered reports from researchers across the globe. Dual computer stations invited opinions on the latest science issues. Interactive projections patterned the floors. An iconic contraption beckoned respondents with the Question of the Day. And a storey-high screen in the centre-stage "HotSpot" announced: "Welcome to Phase 1 of the Weston Family Innovation Centre."

Along with the gasps of delight from the opening event guests, there were a few sighs of relief. March 10, 2005 was no ordinary exhibit hall opening. For the first time in the Science Centre's 35-year history of creating innovative visitor experiences, every bit of content and equipment in the 465-square-metre space was being controlled by a customized digital data management system that does everything from switching the entire space on every day to operating every computer, lighting circuit, amplifier and projector. Science Centre staff can now rapidly respond

to the ever-changing world of current science, inputting, storing and scheduling digital content daily for display both on the floor and on redshiftnow.ca, the Centre's new current science website.



Virtual visitors get the latest current science featured at the Science Centre's Weston Family Innovation Centre Phase 1 via the new website www.redshiftnow.ca including access to field diaries and science discussion boards.

The Weston Family Innovation Centre Phase 1 is a new direction for the Science Centre - challenging visitors to explore current issues in science and technology through dialogue, debate and discovery, and inspiring them to reflect on the implications of science and technology in their daily lives.

Would you meditate to lower your blood pressure?



W. Galen Weston, President of The W. Garfield Weston Foundation, responds to the Question of the Day. Waiting to vote are the Honourable Madeleine Meilleur, Minister of Culture; Douglas Muzyka, President and CEO of DuPont Canada; and Lesley Lewis, CEO, Ontario Science Centre. (Galen Weston voted yes.)

Explained Lesley Lewis, Science Centre CEO: "By allowing visitors to explore current science news and research, both on site and online, we will pique their curiosity and inspire them to ask their own questions and seek answers." Said Lewis: "This approach is one step towards giving visitors the tools and skills necessary to contribute to a culture of innovation." 🌈



a tale of **TWO** chickens



Current science issues can be complex - but that doesn't mean they can't be comprehensible, even entertaining. With the aim of making the latest news on avian flu accessible to visitors, Science Centre staff developed A Tale of Two Chickens as the first live presentation in the Weston Family Innovation Centre HotSpot.

Featuring simple illustrations and headlines ripped from recent news sources, the story revolves around two chickens: one chicken carries a virus that could create a pandemic if it adapts to become contagious to humans - and another chicken is busy laying eggs that Canadian scientists are using to create an avian flu vaccine for humans should a pandemic occur.

Science Centre presenters intend to tackle a range of current and sometimes controversial science issues in the HotSpot, raising awareness and questions about everything from stem cell research to space shuttle launches.



In the HotSpot...Presenter Julie Jones delivers the science behind the avian flu headlines in the new Weston Family Innovation Centre Phase 1.

Creative thinking becomes concrete

As part of the Agents of Change project, concrete stones from flower beds that once adorned the Science Centre's main entrance were transformed into new seating on the renovated solar patio.

Repurposing materials is one way that the Science Centre is applying innovative thinking to cost management in the Agents of Change initiative. Another is working directly with tradespeople and vendors who provide price reductions in response to prompt payment.

New construction methods and ways of working financed a host of new projects, valued at \$3 million. In addition to the original project scope, Agents of Change has: doubled exhibit space in KidSpark; built a glassed-in



concourse on Level C; renewed the solar patio (with wheelchair accessibility); planted an eco-friendly green roof; moved and improved the Challenger Learning Centre and other classroom learning centres; relocated the popular Sport hall to a new home; added washroom facilities and created a lunch area on Level C; renovated the Space hall; added more exits; and established a new corporate brand.

That's a whole lot of change (for the same change). 🌱



A living green roof. As part of Agents of Change, the Science Centre created an outdoor terrace complete with patio and an evergreen rooftop garden.

Along with the launch of Phase 1 of the Weston Family Innovation Centre, 2004-05 saw KidSpark more than double in size to 1800 square metres, with new activities inviting children to explore the human body, practise their design skills and communicate across cultures. This marks the first occasion where two major exhibition areas opened within one year at the Science Centre.

Youth Gallery: Innovation on Display

"Who will think of the next innovative idea that will lead to a better life for people everywhere? We think the Agents of Change and its engaging experience spaces will be a catalyst for this kind of breakthrough innovation." Douglas Muzyka, DuPont Canada

Challenged to come up with new and innovative ways to use DuPont™ Corian® material, a group of Ontario College of Art and Design students designed and created the inaugural display in the Weston Family Innovation Centre's youth gallery. Science Centre staff mentored the students and Knowledge Partner DuPont Canada contributed innovation expertise and helped to develop content.



Laurie Nichol of DuPont (centre) with Ontario College of Art and Design students and their displays in the Weston Family Innovation Centre's youth gallery.

DuPont and the Science Centre are planning collaborations with Canadian students for future youth gallery displays.

100% SCIENCE

What's New?

Zombie worms devour whales

Researchers recently discovered two new species of marine worms that feast on the bones of dead whales at the bottom of the ocean. Lacking eyes, mouth and stomach, the female worms measure several centimetres in length and consist of an egg sac with branching green roots. They use the roots to anchor themselves to the whale and suck its bones.

Source: American Association for the Advancement of Science, 2005



Why do they call this a "zombie worm"? Apparently scientists just liked the name, even though these creepy critters suck bones instead of brains.

So What?

Researchers are learning that whale corpses on the bottom of the ocean can be rich and diverse ecosystems, home to novel species (27 at last count) never seen elsewhere.

Weston Family Innovation Centre

Question of the Day:

Would you use a marijuana-based pain killer?

May 11, 2005, Science Centre visitors responded:

"YES"



68%

"NO"



32%

They're among the **sharpest business leaders** in the **country**. *What do they see in the Science Centre?*

"Canada's young people are its future and the steps being taken by the Ontario Science Centre will help them become the innovators and problem-solvers of tomorrow."

W. Galen Weston, Chairman, George Weston Ltd.
President, The W. Garfield Weston Foundation

"We are extremely proud that our relationship with the Ontario Science Centre puts science and technology into the hands of hundreds of local youth each year."

Stephen Delaney, CEO
Celestica

"As a science company, we were very attracted to the project's ultimate vision to promote a culture of innovation in Canada."

Douglas Muzyka, President and CEO,
DuPont Canada

"The skills that lead to innovation need to be developed at an early age when encouraging natural curiosity keeps young people excited about and interested in technology and science."

Joe Natale, President,
TELUS Business Solutions

The Department of Canadian Heritage donated \$1 million to the Agents of Change initiative, the largest federal contribution in the Science Centre's history.

"In this time of significant cultural renewal in Toronto, we are proud to be the first major cultural institution to reach and even go beyond our original goal. This unprecedented campaign milestone is a strong validation of the Science Centre's ongoing efforts to inspire a culture of innovation among Canada's youth. The Science Centre intends to continue its transformation and growth fuelled by ongoing support from the community."

Nancy Lockhart, Chair
Agents of Change and Ontario Science Centre Board of Trustees

TELUS joins the lead partner lineup

TELUS has joined the Ontario Science Centre in a \$10.1-million, 15-year partnership in support of the Agents of Change initiative. The Science Centre will create a dramatic new outdoor exploration plaza in the space once filled by fountains at the front of the building. The 3200-square-metre plaza will become an engaging, inspiring and interactive large-scale experience area that will appeal to a broad audience. Work started in spring 2005 and will be complete by the summer of 2006.

Along with naming rights to the new exploration plaza, the Science Centre's rain forest and a conference room, TELUS will



Joe Natale, President TELUS Business Solutions, with grade 3 students from Grenoble Public School and Science Centre CEO Lesley Lewis.

also be recognized as the lead sponsor of the Science Centre's School Programs that currently educate more than 220,000 Ontario students annually.

Public and private sector partners boost **Agents of Change** beyond its \$40-million goal

The Government of Ontario: **\$15M**

Knowledge Partner DuPont Canada: **\$2M**

The W. Garfield Weston Foundation: **\$15M**

The Department of Canadian Heritage: **\$1M**

TELUS: **\$10.1M**

Plus, other corporations, foundations and individuals: **\$2.5M**

so far... **\$45.6M**

Weston Family Innovation Centre

Question of the Day:

Would you accept a life-saving transplant from a pig?

March 12, 2005,
Science Centre visitors responded:

"YES"



55%

"NO"



45%

Change is good

“When the only thing constant in a man-made world is change, the Science Centre must be capable of quick change.”

The Science Centre was barely on the drawing board when architect Raymond Moriyama wrote that back in 1964. And more than three and a half decades

later, the Science Centre — which celebrated its 35th birthday in September of 2004 — is still changing: changing its public spaces, its ways of working, its platforms for delivering science, its audience spectrum, and potentially the minds and futures of millions of visitors a year.

Through its ongoing Agents of Change initiative, the Science Centre's goal is to foster a culture of innovation among Canada's youth by exposing them to the attitudes, skills, networks and tools that will help them meet the challenges of the 21st century. One of

the maxims of innovation is that, “every new answer gives rise to new questions.” Interestingly, it's also a quote from the Science Centre's first guidebook, published when the Centre opened its doors in 1969 as the Centennial Centre of Science and Technology.

Evolving an **ICON**

With its goal to spark creativity, inspiration, innovation and change in visitors through the new experience areas of Agents of Change, the Ontario Science Centre consulted Bruce Mau Design about renewing and refreshing its visual identity. A big part of that identity is the Science Centre's familiar trillium logo.

Here's what evolved during the rebranding process.



Ontario Science Centre
An agency of the Government of Ontario

The original logo is exceptionally strong, binding together scientific phenomena, geometry and symbolism into a universally recognizable form - a remarkable, timeless piece of design work.

- Bruce Mau Design



Rotate, crop or map the logo onto a sphere...

Renew the logo by returning it to a more robust colour palette. Then extend the root logo in exciting, new ways.



Crosshatch it to create movement, energy yet maintain the central trillium form.

**ONTARIO
SCIENCE
CENTRE**

The new wordmark emphasizes “science” and uses the robust, stylish Meta font for a fresh, contemporary legibility.

Add content to support events and marketing...



**“If visitors come out saying...
‘I must know more’
the Centre can be termed a success.”**

Raymond Moriyama,
original architect of the Ontario Science Centre, 1964

**“If a visitor walks out...with more questions
than he or she had coming in,
then we will have succeeded.”**

Lesley Lewis,
CEO, Ontario Science Centre, 2005

**100%
SCIENCE**

What's New!

Self-cleaning feet

How do geckos' sticky feet stay so clean? Their toes are covered in billions of tiny air tips that can stick to walls using intermolecular interactions called Van der Waals forces. But of the two attractive forces, one from the gecko and the other from the wall, the wall's force is stronger. So the dirt from a gecko's feet sticks to the wall and the gecko walks off with clean feet!

Source: Proceedings of the National Academy of Sciences, Jan. 11, 2005

So What!

As scientists better understand how adhesive forces created by gecko toes work, they aim to develop self-cleaning, superadhesives such as reusable, sticky tape for use in space and under water and “Spiderman” robots for search and rescue missions.

**Bruce Mau Design on...
change:**

“Identities are evolving entities that need to be revisited and revitalized to keep them relevant and exciting to new audiences.”

the Science Centre's logo:

“The Ontario Science Centre has one of the best cultural logos in existence. It is a classic, originally designed in the 1960s by the late Allan Fleming. The challenge was to preserve its equity and heritage while building a wordmark and a branding architecture that would support it.”

the creative process:

“We went through a phase of research and development... to understand how the Ontario Science Centre sees itself, how it has changed over time, and what it hopes to become.”

the rebranding result:

“The essence of the mark is unchanged. The branding system that we have developed together with the Ontario Science Centre gives it prominence as a destination and increases its stature as a Canadian cultural landmark, rather than being simply a place for events.”

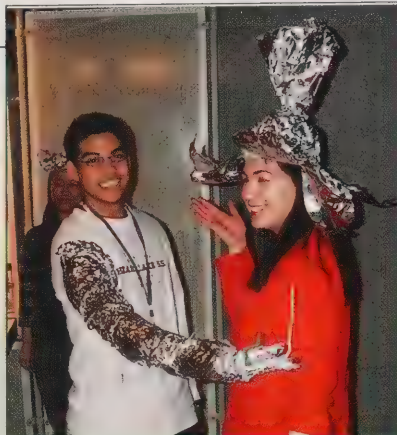
“We’re changing our ways of working here at the

Pilot Tests

Would you look for science and innovation in duct tape hats, pub science nights, or a gadget made from string and cardboard?

The Ontario Science Centre does. These unconventional methods of using ordinary items are called **Pilot Tests** — one of the new ways that the Science Centre is coaxing out the inner-innovator in visitors.

Students and visitors took part in more than 100 pilot tests during 2004/05 that will help to shape future Science Centre experiences.



Ontario Science Centre Science School students were challenged to create fashions out of cheese cloth and aluminum foil in a pilot test for Phase 2 of the Weston Family Innovation Centre.



Taking science to the people at Pub Science nights.

Donning lab coats and carting a chalkboard, Science Centre staff challenged pub patrons to stump them with questions about science. Questions included: what is relativity, why does alcohol make you drunk, and what is the best eco-friendly vehicle?

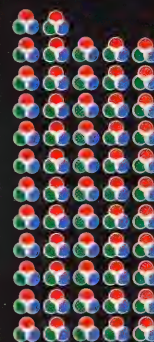
Weston Family Innovation Centre

Question of the Day:

What time of day do you feel smarter?

July 5, 2005,
Science Centre visitors responded:

“AM”



57%

“PM”



43%

The topics were hot and the debates were heated.

Public FORUMS

Sometimes there’s more to the story.

The Science Centre’s **Public Forums** gave visitors the chance to ask questions of experts and stimulate dialogues on current science and technology in the news.

GMOs:

genetically-modified organisms

November 27, 2004

Should
marijuana
be legalized?

February 12, 2005

Stem cell research:
how far do we go?

November 20, 2004

DNA profiling:

identification, paternity testing
and genetic discrimination

February 19, 2005

2004-2005

THE YEAR

Change your mind.



ONTARIO
SCIENCE
CENTRE

Lesley Lewis, CEO & Nancy Lockhart, Chair of the Board of Trustees

The past year was one of unprecedented accomplishments for the Ontario Science Centre.

Exhibition halls and the Shoppers Drug Mart® OMNIMAX® Theatre were buzzing with visitors of all ages from Ontario, across Canada and around the world. On March 29, 2005, Kevin Kohnke of Niagara Falls, New York, accompanied by his family, was welcomed as the one-millionth visitor of the year. By the time we closed our books on March 31, we had welcomed 1,011,747 visitors.

Of these million-plus visitors, two groups deserve special mention. 228,232 were school visits – students visiting the Science Centre with their teachers as part of a curriculum-linked initiative. A further 151,134 were member visits. Over the past year, our membership has grown from 12,471 to 13,975 member families.

Two major milestones were achieved related to our Agents of Change initiative. In December 2004, we opened an expanded KidSpark in response to our resounding success when KidSpark first opened in

late 2003. In order to accommodate all of our visitors and allow them to spend more time in KidSpark, we added 900 square metres of activities as well as a

large, sunlit concourse with new services for families to enjoy. This transformation also allowed us to create a brand new Challenger Learning Centre full of exciting new resources that is now located on Level E.

In March 2005, we were delighted to open Phase 1 of the Weston

Family Innovation Centre. There were audible gasps on March 10 as the curtains parted and, for the first time, people saw the remarkable new space. Phase 1 – designed as a scientific Times Square – is the place our visitors can go to learn about the latest issues in science, to see the day's science headlines presented onscreen and explored live on stage, to respond to a provocative question of the day, to read field diary entries from our correspondents around the world, and to discuss current issues in science and technology. Phase 1 of the Weston Family Innovation



From left: Nancy Lockhart; John A. MacDonald, Agents of Change Senior Project Manager; Lesley Lewis.

Centre is about rapid response to current science both on the floor and beyond our walls. We simultaneously launched our new website redshiftnow.ca for those who wish to dig deeper and to involve those unable to visit the Centre.

Throughout the year Science Centre staff worked with Bruce Mau Design on a multi-layered initiative that resulted in the creation of a new brand identity for the Centre and a new wayfinding system to be implemented by summer 2006.

In December Lesley was invited by the Asia Pacific Network of Science and Technology Centres (ASPAC) to be the keynote speaker at their annual conference in Hong Kong. The speech, Creating a Platform for Twenty-First Century Innovation, created significant interest in Agents of Change from science centres throughout the region.

Less than a month later the world was rocked by the December 26 tsunami. Within a week, the Science Centre was offering visitors a program on "The Science behind the Tsunami". The weekend sessions continued for a month with more than 300 people at many sessions. Through Lesley's recent contact with the Indonesian Science Centre, the programming content was also provided for use by Indonesian colleagues.

As 2004-2005 ended, plans were well underway for a major announcement. On April 5, the Science Centre revealed it had received a \$10.1-million sponsorship from TELUS to enable the creation of a 3200-square-metre exploration plaza in the former fountain area in front of the Centre. We also announced that the

Ontario Science Centre had become the first of Toronto's major cultural campaigns to go "over the top". Surpassing an original campaign goal of \$40 million, the Science Centre had raised \$45.6 million!

2004-2005 was truly an amazing year, and is a hint of greater things to come. In 2005-2006, development will continue on Phase 2 of the Weston Family Innovation Centre. Opening June 2006, it will include Citizen Science, Material World, Media Studios and the Challenge Zone. Also in the summer of 2006, the Science Centre will open the exploration plaza, sponsored by TELUS, and unveil Grand Central, an amazing space featuring selected works from a major, juried international art competition that demonstrate the intersection of art and science.

But 2005-2006 is not only about planning for 2006. This year, the Science Centre will continue the pace it has set in 2004-2005, offering exhibitions, programs and films that will delight, inform and challenge visitors of all ages with engaging and thought-provoking experiences in science and technology. In addition, the Science Centre will host the Canadian premiere of BODY WORLDS 2 - opening September 2005. This remarkable exhibition has drawn enormous crowds wherever it has been shown - Berlin, London, Los Angeles, Chicago. We are sure Toronto will be no exception.

We look forward to welcoming you in 2005-2006. Thank you for your support.

Lesley Lewis Nancy Larkhart

Agents of Change Donors and Partners

The following donors and partners are enabling the Agents of Change transformation. We are very grateful for their commitment to Agents of Change and to helping shape the next generation of Canadian innovators.

\$15,000,000

The W. Garfield Weston Foundation

Government of Ontario

\$10,000,000

TELUS

\$2,000,000

DuPont Canada - *Knowledge Partner*

\$1,000,000

Department of Canadian Heritage

\$100,000 - \$999,999

Ontario Early Years Challenge Fund

Imperial Oil Foundation

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CIBC

Scotiabank

\$10,000 - \$99,999

Bell Canada

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The Henry White Kinnear Foundation

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Roy T. Graydon

MDA

Gail B. O'Brien

Howard Sokolowski and Linda Frum

The Canavan Family Foundation

Dr. Robert G. Miller

Nancy Birnbaum and Rod Skelton

Mark and Suzanne Cohon

Maritz Canada Inc.

Up to \$9,999

Rosemary Hall

Peggy Mulligan

Lesley V. Lewis

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Sam Zuk

Suzanne and David McQueen

Diamante Developments

Cameran Mirza

Edward J. Alon

Robert Chant

John E. Abele

Bennett/Rathbone Family

Maggie and Bern Gorecki

Louise and Greg Aspin

Errol D'Costa

Peter Irwin

Teri A. Kirk

Marilyn Linton

The John McKellar Charitable Foundation

The Troop Family

Paisley/Miller Family

Jeff Pocock

Anonymous (2)

Major Annual Sponsors and Donors

The Ontario Science Centre gratefully acknowledges the generosity of its 2004/2005 corporate sponsors and donors:

Cultural Tourism Marketing Fund *Marketing Support for SARS Recovery*

Jelly Belly Candy Company *Jelly Belly® presents CANDY UNWRAPPED North American Tour Sponsor*

Ontario Cultural Attractions Fund *Agents of Change Transitional Funding*

Shoppers Drug Mart *Shoppers Drug Mart® OMNIMAX® Theatre Sponsor*

AT&T Foundation *OSClub 2004 Donor*

Celestica *2004 Robot Building Workshop Sponsor*

Ontario Genomics Institute *Discover Life! Regional Partner*

Pepsi Bottling Company *Exclusive Soft Drink Supplier*

Rogers Cable Communications Inc. *Media Sponsor of 2004/05 Science School*

Toronto Star *Cosmic Questions Sponsor*

CIHR Partners *Discover Life! Donors*

EfstonScience Inc. *Star Parties 2004 Sponsor*

Mill Creek Seed Co. *Bird Seed & Feeders Supplier*

ProAction, Cops & Kids 2004 *Robot Building Workshop Donor*

CONTINUING FRIENDS:

Aramark Canada Ltd.

Mastermind Educational Technologies Inc.

Stanley Todorow Estate

Annual Individual Donors

- Members
- KidSpark Founding Donors

This past year, the generous support of the following individuals contributed to our new exhibits and programs, and helped keep the Science Centre accessible to all.

\$2500 +

Mark Cohon
Robert L. Ehrenfeld
Nancy Lockhart & Murray Frum • •
Dr. Robert Miller •
The O'Brien Family • •
Anonymous •

\$1000 - \$2499

Peter Irwin •
Marilyn Linton •
Peggy Mulligan
Anonymous •

\$250 - \$999

Nancy Birnbaum
Rosemary Hall •
Ronald Ariel Javitch •
In memory of John King Lorimer •
Erik Parnoja •
Mr. Raffaele •
Robert & Elizabeth Schad •
Andrew Willis •

up to \$249

Edward J. Alon •
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Sam Zuk
Anonymous (2) •

Ontario Science Centre Board of Trustees as of March 31, 2005

NAME	FIRST APPOINTMENT DATE	EXPIRY DATE OF CURRENT TERM
Chair, Nancy Lockhart	January 30, 1998	January 29, 2006
Vice-Chair, Roy Graydon	December 30, 1999	December 29, 2005
Nancy Birnbaum	April 29, 1999	April 28, 2005
Dr. John R.G. Challis	September 17, 2004	September 16, 2007
John Robert Chant	June 13, 2001	June 12, 2004
Mark Cohon	August 21, 2003	January 29, 2009
Julie DiLorenzo	September 9, 2002	September 8, 2005
Rosemary Hall	April 29, 1999	April 28, 2005
Peter Irwin	September 17, 2004	September 16, 2007
Shanitha Kachan	November 3, 2004	November 2, 2007
Arthur Konviser	May 14, 1997	June 20, 2005
Marilyn Linton	March 5, 2003	March 4, 2006
Robert J. Macdonald	April 9, 2003	April 8, 2006
Robert Miller	July 31, 2002	July 30, 2008
Sarah Mitchell	September 17, 2004	September 16, 2007
Terry Mosey	July 21, 2004	February 9, 2005
Margaret Mulligan	December 30, 1999	March 4, 2006
Barbara Murck	June 17, 1998	June 15, 2004
Gail O'Brien	September 9, 2002	September 8, 2008
Jeff Pocock	June 10, 1998	June 26, 2004
Gordon Stromberg	July 31, 2001	July 30, 2004
Sam Zuk	July 31, 2002	July 30, 2008



Ontario Science Centre
An agency of the Government of Ontario

770 Don Mills Road
Toronto, Ontario
M3C 1T3
www.OntarioScienceCentre.ca

Current SCIENCE

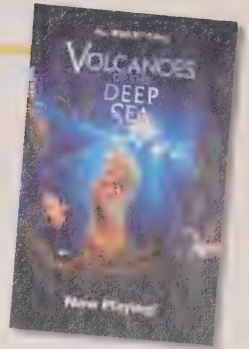
*What are the essential elements of life?
How can you distinguish between the living
and the non-living world?*

Traits of Life, a travelling exhibition produced by the Exploratorium in San Francisco, California, encouraged Science Centre visitors to explore these and other questions from October 2004 to January 2005.



Volcanoes of the Deep Sea

brought new life to the Science Centre's IMAX Dome screen. The film examined the fantastic creatures that thrive in astounding density near deep-sea hydrothermal vents—the volcanoes of the deep sea—despite crushing pressure, extreme temperatures, toxic water and total darkness.



GEEE! in Genome, an exhibition created by the Canadian Museum of Nature, demystified the study of genes and their functions. Visitors to the Ontario Science Centre between October 31, 2004 and January 9, 2005 encountered controversial issues, such as made-to-order offspring, immortal pets, genetically-modified food, life spans of 150 years and human cloning.



Weekend presentations on the science behind tsunamis ran throughout January 2005.

"The tsunami in Asia has had an impact on many people in our community and we wanted to help by doing what we do best here at the Science Centre, namely, explaining the science in the world around us."

David Sugarman,
Science Centre researcher

100% SCIENCE

The Science Centre asked:

Does stem cell research hold the key to solving health problems?

Visitors responded: JUNE 24, 2005

"I think stem cell research will help our health in the present and future due to the amount of diseases in the world."

"It may hold some answers, however I believe it to be morally wrong!"

"Yes, I think that with further research and new technology we can make great strides to better recovery from illness and accidents."

What is Payload Science?

The Science Centre is providing a platform for the science community to conduct real research with visitors, while visitors are given the opportunity to interact with real scientists. Last summer, for example, researchers from the University of Toronto Child Study Centre surveyed children's decision making with more than a hundred 3 to 5-year-old visitors to the Science Centre.

“...to expand our platforms of delivering science

COSMOS

Real-world problem solving is tackled in the Weston Family Innovation Centre. Out of this world **problem solving** is best handled in the Challenger Learning Centre (CLC).

Groups of students and professionals work as astronauts and mission controllers in the CLC's space mission simulator. In the process, they develop important problem-solving and cooperative work skills. The CLC's team-building programs offer professionals a unique setting to face communication and leadership challenges that relate to their work. In 2005, a renovated CLC expanded its programs to reach high schools in grades 9 and 10 for the first time.

Cosmic Questions Are we alone?

How do we see our place in space and how has it changed throughout history?



Visitors to the Cosmic Questions exhibition (December 15, 2003 - September 6, 2004) learned what scientists currently know about the universe, but were left with more questions — questions to which they may become the scientists to find the answers.

100% SCIENCE

The Science Centre asked:

Would you be comfortable under a robot's medical care?

Visitors responded: June 19, 2005

"Yes, if it saved my life."

"Yes, if it's a simple checkup - but not for surgery."

"No, I wouldn't as I would need the human touch to help convince me that I was improving. The art of getting better is in your mind."

ROBO-DOCS perform hospital rounds

St. Mary's Hospital in London is sending robots to visit patients whose doctors cannot be on site. Operating a console and joystick from a remote location, the doctor can use the bedside robot to read charts, review test results and consult with the patient. Although the robot cannot physically examine a patient, its "face" can project an image of the absent doctor, helping to maintain face-to-face communication between doctor and patient.

100% SCIENCE

Although astro-tourism is bound to become more affordable, a ticket to the International Space Station currently goes for \$20 million, while an orbit round the Moon is an exorbitant \$100 million.

The Science Centre asked:

Would you pay to take a trip into space?

Visitors responded: August 16, 2005

"Yes, I would. It would be an amazing opportunity to see what very few others have seen."

"Is there an in-flight meal? If so, yes."

"No, we should be exploring our oceans and understanding our planet instead of blowing resources on space exploration."

Star Parties

Reuniting an urban audience with its night sky

More than 1400 people looked skyward at Star Parties that celebrated the first anniversary of the power blackout of August 2003, the 1969 lunar landing and a rare lunar eclipse. Star Parties are a newer platform for public programming in which the Science Centre works with volunteers from the Royal Astronomical Society of Canada to open the night sky to an audience who might otherwise never experience it.



Canadian astronaut Chris Hadfield visited the Science Centre's MoonFest on July 20, 2004 to speak about the lunar landing and Canada's role in space exploration.

"When I was a 9-year-old kid 35 years ago tonight I had no idea that I'd become an astronaut," said Hadfield. "Some kid who is in university or high school right now has a good shot at walking on another planet or exploring the universe."



d technology...

THE YEAR

Creative TECHNOLOGY

01010011 01000011 01001001 01000101 01001110 01000011 01000101

spells SCIENCE in binary ASCII code.

All things **digital** were celebrated at the Science Centre in May 2004.

Digifest is Canada's largest annual festival of design and digital culture. Presented in **partnership** with the Design Exchange and Harbourfront Centre, *Digifest* showcased local and international artists and designers sharing the latest in cutting-edge digital media products and innovations.



Relating people to public spaces, *TouchMe*, a *digifest* installation by David Kousemaker of Holland, allowed visitors to contribute an instant portrait to an ever-changing image wall.



Visitors to the McLuhan Multimedia Festival enjoyed videos and animation, digital photographs, illustration, manipulated images, digitally created sound and interactive media created by Canadian high school students.

TECHNOLOGY is tricky to keep up with. Unless, of course, you're inventing it.

The Science Centre's visitors showed their programming prowess at various **robotics** events. A diverse group of hobbyists and pros alike turned up to take part in the Eastern

Canadian Robot Games in November 2004, the FIRST (For Inspiration and Recognition of Science and Technology) event in January 2005, and the OCAD Sumo Robot Challenge in March 2005.

Over the past seven years, the Community Access Program has provided a free Science Centre visit to more than 35,000 people who otherwise could not have afforded it. New in 2004, the Robot Workshop invited 30 families from surrounding neighbourhoods to build robots together at the Science Centre. Volunteer workshop facilitators from electronics manufacturing company Celestica and members of the Toronto Police and Emergency Task Force offered guidance and provided funding

"When kids see a robot on TV, it's in the realm of fantasy. When they are actually here and see what can be done, they think, 'I can do something like this myself.' ... The effect is just incredible."

Myke Predko, P.Eng, Celestica

The Robot Workshop - A Community Access Project



“...to reach the largest and broadest group o

REAL WORLD

Challenge Zone

An oil spill is threatening local wildlife. How do you clean up the mess? That's what many Science Centre visitors were faced with in the Challenge Zone. Given a real-world problem, teams are asked to come up with creative solutions using a mix of common and unusual materials. Within an hour, teams brainstorm, design, test and build to create innovative solutions.

Presented with a time-limited “Challenge of the Day”, student teams exercised their imaginations and creativity by designing and building solutions to “real-world” problems. Part of the Weston Family Innovation Centre, the Challenge Zone was tested by school groups before being rolled out as a fee-based school program.



From May 3-5, 2004, local high school students competed in the Aventis Biotech Challenge, a science competition designed to provide a hands-on learning experience with biotechnology industry professionals. Science Centre Science School Student projects included submissions on natural sunscreen, lawn maintenance and pancreatic cancer treatment.

Science School students Adelle Vandersteen and Evgenia Bloch were awarded fifth place for their project, “Light Up your Lawn”.

Environment AND Health

At the Science Centre April isn't the cruellest month, it's **Environment Month**.

Visitors examined the impact of global warming in *Sila – Clue in to Climate Change*, met local wildlife including a red-tailed hawk, a striped skunk and a turkey vulture, took part in wetland workshops, learned about local urban forests and appreciated the paths of migrating birds.

And then the skies turned violent and mountains exploded. On film, that is, where *Forces of Nature* opened on the IMAX Dome screen on June 4, 2004 to terrify audiences with earthquakes, volcanoes and tornadoes. Viewers met the scientists who risk their lives to understand these forces and increase the odds of people surviving catastrophes.



In September 2004, a dedicated group of volunteers packed garbage bags full of junk and debris found along the banks of the Don River, in the Science Centre's backyard. The garbage was collected and categorized and the data was sent to the Great Canadian Shoreline Cleanup.

“In my usual life I do not have any chance to get close to science... but in OSClub I experience what ‘real’ science is like.”
2004 OSClub alumnus

Now reaching grade 10 students in addition to grade 9 students, the OSClub summer program prepares highly-motivated youth for a future in science. The students experience new and exciting ways of learning science, math and technology while working with industry mentors, educators and (pre-service) teachers to solve real-world problems. OSClub focuses on biotechnology, aerospace, global environment, engineering and telecommunications while teaching leadership, goal setting and attainment and teamwork.

Weston Family Innovation Centre Question of the Day:

Would you inhale a hormone to be less shy and more trusting?

June 7, 2005,
Science Centre visitors responded:

“YES”



58%

“NO”



42%

people possible.”

Jennifer Martin, Director of Visitor Experience,
Ontario Science Centre

THE YEAR

LEARNING

Science is Primary

“Science is not a scary thing but something that is fun, very important and actually quite easy to understand when shown to you the right way. My only regret is that I didn’t do all this earlier,” says Bernadette Bujnowski, a student of Ryerson’s Bachelor of Arts in Early Childhood Education program working with Science Centre Hosts and young visitors.

Ryerson University believes that the KidSpark experience has, “set the standard for other field placements” enhancing their ECE training. The Science Centre has influenced Ryerson’s curriculum - the university plans to add science-related courses to their ECE program in 2006. The newly expanded KidSpark area now also includes two primary workshop spaces for JK to grade 3.

Science is Secondary

Since the Science Centre developed new programs to help to deliver new Ontario secondary school curriculum, the attendance of secondary school groups has soared. More than 200,000 students attended the Science Centre in 2004/05, and more than 20 percent of those students were from grades 9 to 12.

On the Road with the Ontario Science Centre

For over 15 years, the Science Centre’s International Sales department has designed and developed new science centres in the UK, Asia, the Middle East, the United States and Canada. They also coordinate touring schedules of popular Science Centre exhibitions. Here’s where the exhibitions have been lately:

Circus! Science Under the Big Top

Great Lakes Science Centre (Cleveland, OH)

October 2, 2004 - January 2, 2005

Papalote Museo del Nino (Mexico City, MX)

Feb 5, 2005 - May 1, 2005

Scream Machines: The Science of Roller Coasters

Bishop Museum (Honolulu, Hawaii)

June 5, 2004 - August 31, 2004

The Tech Museum of Innovation (San Jose, CA)

September 18, 2004 - January 3, 2005

Jelly Belly® presents CANDY UNWRAPPED

Pacific Science Center (Seattle, WA)

October 1, 2004 - January 3, 2005

Strange Matter (Large version)

Virginia Air & Space Center (Hampton, VA)

May 29, 2004 - September 6, 2004

Museum of Science (Boston, MA)

October 2, 2004 - January 3, 2005

COSI (Toledo, OH)

January 29, 2005 - May 8, 2005

Strange Matter (Small version)

Museum of Discovery and Science
(Fort Lauderdale, FL)

June 5, 2004 - Sept 6, 2004

Discovery Centre (Halifax, NS)

September 25, 2004 - January 3, 2005

Discovery Center of Idaho (ID)

Jan 22, 2005 - May 1, 2005

A Question of Truth


Sci-Bono Discovery Centre

(Johannesburg, South Africa)

April - October 2004



Returning in February 2005 from a wild ride of international touring for 6 years, Scream Machines wowed the crowds in the Science Centre’s Great Hall.



What's New?

Pachyderm mimics

Researchers have discovered that elephants can learn to imitate a variety of sounds, ranging from the calls of other elephant species to the noise of passing trucks.

Source: sciencenews.org

So What?

Elephants now join primates, marine mammals, bats and birds as animals that can learn to mimic sounds. Researchers have studied elephants for hundreds of years but have only recently discovered their vocal talents. What else is yet to be discovered?

“We experienced our best March (2004) in history with an 80 percent increase in attendance over the previous year during the exhibition of **Circus: Science Under the Big Top!** Our visitors keep asking when the exhibit will be at the Center again, so we are bringing it back in February 2006.”

Kim Hinson, Deputy Director
Virginia Air & Space Center
Hampton, Virginia

Counting **CHANGE** in 2004-2005

472 Number of seats filled with visitors in the Imperial Oil Auditorium for **SOLD-OUT** presentations on the science behind tsunamis

\$5.6 million
Amount by which the Science Centre has so far exceeded its **Agents of Change** campaign goal

50 Number of years that a person's face can age in the Science Centre's Amazing Aging Machine

189 Number of trips to **Mars** and the **Moon** made by visitors in the Science Centre's **CHALLENGER LEARNING CENTRE**

30 Percentage of Science Centre public space transformed by Agents of Change

8 Number of times www.StrangeMatterExhibit.com has been awarded and recognized by media and educational organizations

86 Number of stop-motion animation videos created by visitors during a Media Studios pilot test

11,747 Number of visitors by which the Science Centre surpassed its annual target of 1,000,000 visitors

6000 Number of visitors who solved real-world problems in a Challenge Zone experience

Number of **NEW** **110** Science Centre activities tried out by visitors during "pilot tests"

8 Years of age (or less) a Science Centre visitor must be to let their parents into **KidSpark**

1,011,747 Number of visitors who were delighted, informed and challenged by a Science Centre visit

72 Age in hours of the Science Centre's youngest ever visitor

1536 Number of Science Centre visitors who said that they would be willing to pay \$200,000 US to go up in space

44¹² Number of sleeping bags that hit the floor during a year of Science Centre Sleepovers

32 Percent increase in the number of web visitors to www.OntarioScienceCentre.ca over previous year

2770 Number of DNA samples run last year in the Science Centre's most popular school program

10 Number of Field Diarists writing about their adventures for the Science Centre's Weston Family Innovation Centre and online at www.redshiftnow.ca

14 Days in March during which the Science Centre drew more than **97,000** visitors

33

Number of Northern Cardinals spotted and counted at the Science Centre during Bird Studies Canada's Project Feederwatch

100,000 Average number of hairs on the head that get a rise out of the Science Centre's iconic Van de Graaff electricity ball

7 Number of days that a red-tailed boa constrictor went AWOL at the Science Centre

993 Number of Science Centre visitors who said that they would drink milk from a cloned cow

60 Kilometres of cable used in wiring up Phase 1 of the Weston Family Innovation Centre

1982 Number of aspiring scientists who participated in the Science Centre's 2004 Summer Day Camp

763,479 Number of visitors reached internationally through the Science Centre's travelling exhibitions

3,216,833 Minds "**CHANGED**" by a Science Centre experience in 2004-2005

In Our Next Issue

Preparing for the launch of

PHASE 2 of the WESTON FAMILY INNOVATION CENTRE



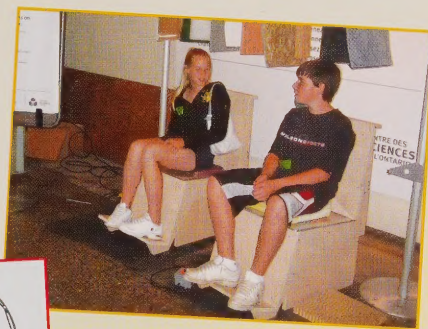
To measure positive health effects of owning pets, visitors monitor their blood pressure and heart rates before, and after, petting a rabbit in a Citizen Science pilot project.



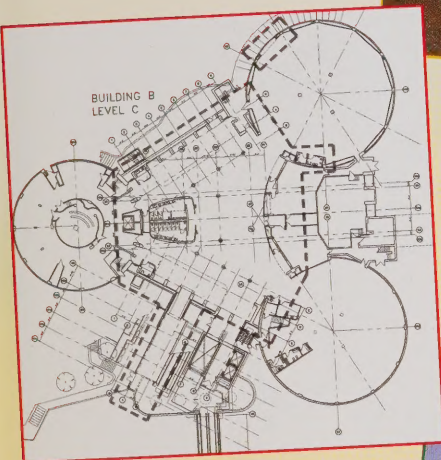
A new Media Studios pilot test where visitors create their own stop-motion animations.



Solving a "real-world" problem in the Challenge Zone, visitors work with everyday items to build prototypes and solutions.

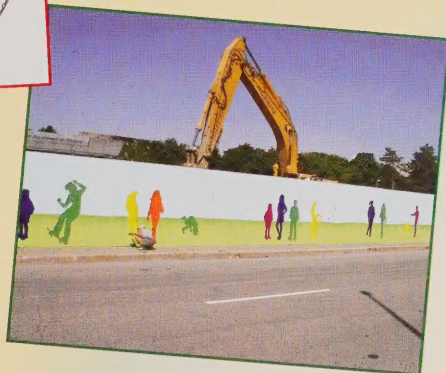


Visitors test rubber, hay and cardboard on a vibrating chair for Material World.



GRAND CENTRAL

What do you see in this space?
Find out how international artists got inspired to create installations for *Grand Central*, an exhibition space at the nexus of art and science. Selected artworks and proposals and visitors' comments are revealed.



EXPLORATION PLAZA

What's happening behind this wall?
Read about what's really going on behind the hoarding in the Science Centre's front yard. Take a tour of the exploration plaza sponsored by TELUS, where the great outdoors gets a science make-over.

Gunther von Hagens'
BODY WORLDS 2
The Anatomical Exhibition of Real Human Bodies



Provocative. Awe-inspiring. Human.

A probe behind-the-scenes of possibly the most provocative show the Science Centre has ever exhibited—the Canadian premiere of

Gunther von Hagens'
BODY WORLDS 2,

an anatomical exhibition of real human bodies.

PLUS!

CAFÉ SCIENTIFIQUE

Where science meets Queen St.—
a downtown forum for discussion,
debate and drinks.

YOUTH EXCHANGE:

See where Science Centre volunteers, Science School students and university interns gather to brainstorm, exchange ideas and create projects.

FROM AFRICA TO THE ANTARCTIC:

Scientists and researchers write Field Diaries from scientific frontiers around the globe.

100% SCIENCE

From astronomical to zoological, the Science Centre reports real science and technology news straight from the headlines.

Which is **NOT** a real animal?

- A) Wolphin B) Geep
C) Hinny D) Tigon
E) Cantelope F) Jagger
G) Zedonk H) *All of the above*

ANSWERS:

All are real animals except for E) Cantelope.

A), C), D) and G) are hybrid animals. Hybrids occur when two species are closely related enough for egg and sperm to result in a viable embryo. Mostly bred as curiosities or for genetic research, hybrids can happen naturally, such as when two animal species are caged together or when a same-species mate is not available in the wild. Some hybrids are fertile, others are born sterile. Hybrids have intermediate features and each cell is a mix of chromosomes from the parental species. B) is a chimera, an organism created by combining embryos of two different animals. The result is a creature with features formed from a mix of genetically different cells. Here are the facts:

A) A Wolphin is cross between a Bottlenose Dolphin and a False Killer Whale (another species of dolphin).
B) A Geep is a part goat/part sheep chimera, the product of a lab experiment fusing sheep and goat embryos.
C) A Hinny is a hybrid of a horse stallion and a donkey mare (called a jenny or jennet).
D) A Tigon is the result of breeding a male tiger to a female lion (as opposed to a liger - a cross between a male lion and a female tiger).
E) A Cantelope sounds like a camel/antelope hybrid, but it is actually a misspelled muskmelon known as cantaloupe, a rich source of vitamins A and C.
F) A Jagger could be a jaguar/tiger hybrid (no record of one as yet) but it is also a rock 'n' roll animal named Mick.
G) A Zedonk is a male zebra and female donkey hybrid.

Scientists are currently injecting human cells into mouse fetuses. Does that mean the resulting chimera is called a "house"?



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